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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,342	03/05/2002	Eric T. Heggs	T268.12-0051	7712

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EXAMINER
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LUDLOW, JAN M

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/092,342

Applicant(s)

HEGGS ET AL

Examiner

Jan M. Ludlow

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/29/2002
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

Art Unit: 1743

1. Claims 1-10, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 8-12, "receiving..." is directed to a method step, and it is unclear what structural limitation is intended. In claim 3, "first and second analyzers" lacks antecedent basis. See also claims 6-7.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1743

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 5, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Worall.

Worall teaches traps 1-5, automatically controlled valves (instant autosamplers) between the traps and inlet 22 (col. 2, lines 4-14) coupled to detector 17 which can pass purge air 29 to the traps via line 21. Note that the method recitation in claim 1 has not been given weight in the apparatus claim because it is directed to intended use.

7. Claims 1, 2, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nickerson.

Nickerson teaches traps 360-363 coupled in series to detector 135 which may include GC column 136. See Figs. 1, 3. Note that the method recitation in claim 1 has not been given weight in the apparatus claim because it is directed to intended use.

8. Claims 1, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Espitalie.

Espitalie teaches traps 25, 26 coupled to detector 22 which may include GC column 29. Note that the method recitation in claim 1 has not been given weight in the apparatus claim because it is directed to intended use.

9. Claims 3, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espitalie as applied to claims 1, 4 above.

Espitalie fails to explicitly teach simultaneous loading and desorption.

It would have been obvious to load, e.g., trap 25 while desorbing trap 26 because the valve positioning in Figure 2 suggests to one of ordinary skill in the art to do so and Espitalie teaches that the desorbates are passed separately to the detector (col. 5, lines 15-23). Figure 2 shows that simultaneous desorption to the detector cannot occur. With respect to claim 12, it would have been obvious to repeat the method with the same or a different sample in order to provide duplicative or new measurements. With respect to claims 3, 13, it would have been obvious to provide an automatic controller in order to automate the method, e.g., in order to minimize technician labor costs and/or human error.

10. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cazer.

Cazer teaches columns 15, 16 coupled to detector 17 via a fluid handling system that can deliver a fluid mobile phase with or without sample, e.g., from the first column to the detector; from the second column to the detector; from the first column to detector to the second column; and from the second column to the detector to the first column (e.g., col. 3, lines 20-25). The columns are therefore in series, and mobile phase may

Art Unit: 1743

be passed from the detector to either column. Fluid handling is via multiport valves under automatic control (e.g., col. 3, lines 27-41). More than 2 columns may be used (Figure 2).

Cazer fails to teach that the columns are purge and trap concentrators.

It would have been obvious to one of ordinary skill in the art to use known adsorbent beds for their known function of trapping components which may be eluted by using a change of mobile phase or other operating conditions encompassed by the teaching of chromatographic columns and constituting trap and purge concentrators as claimed. With respect to GC and carrier gas, it is the examiner's position that "fluid" as taught by Cazer encompasses gas, and that an additional column such as in Fig. 2 routed before the detector constitutes a GC analyzer. It would have been further obvious to provide the columns and transfer lines in a GC oven for temperature control as was known in the art in a GC embodiment. With respect to the method claims, it would have been obvious to use the "first column to the detector" and "second column to the detector" pathways as taught by Cazer, the valving permitting simultaneous loading of one column and elution of the other (Fig. 5).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

Art Unit: 1743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow  
Primary Examiner  
Art Unit 1743

Jml  
September 27, 2004